

**U. S. PLANT PATENT APPLICATION OF**

**MARK A. SMITH**

**FOR: CHRYSANTHEMUM PLANT NAMED**

**‘GOLDEN YOHELGA’**

*SMITH, Mark A.*

TITLE: CHrysanthemum plant named ‘GOLDEN YOHELGA’

APPLICANT: MARK A. SMITH

BOTANICAL CLASSIFICATION/CULTIVAR DESIGNATION:

5       *Chrysanthemum X morifolium* cultivar Golden Yohelga

#### BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct cultivar of Chrysanthemum plant, botanically known as *Chrysanthemum X morifolium*, commercially known as a garden-type Chrysanthemum and hereinafter referred to by the name ‘Golden Yohelga’.

The new cultivar is a product of a planned breeding program conducted by the Inventor in Alva, Florida. The objective of the breeding program is to create new garden-type Chrysanthemum cultivars having inflorescences with desirable inflorescence forms, attractive floret colors and good garden performance.

The new Chrysanthemum is a naturally-occurring whole plant mutation of the *Chrysanthemum X morifolium* cultivar Yohelga, disclosed in U.S. Plant Patent number 13,811. The new Chrysanthemum was discovered and selected by the Inventor as a single flowering plant

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from within a population of plants of the cultivar Yohelga in a controlled environment in Alva, Florida in April, 2002. The selection of this plant was based on its desirable inflorescence form, attractive ray floret color and good garden performance.

5           Asexual reproduction of the new cultivar by terminal vegetative cuttings taken in a controlled environment in Alva, Florida since June, 2002, has shown that the unique features of this new Chrysanthemum are stable and reproduced true to type in successive generations.

#### SUMMARY OF THE INVENTION

10          The cultivar Golden Yohelga has not been observed under all possible environmental conditions. The phenotype may vary somewhat with variations in environment such as temperature, daylength and light intensity, without, however, any variance in genotype.

15          The following traits have been repeatedly observed and are determined to be the unique characteristics of 'Golden Yohelga'. These characteristics in combination distinguish 'Golden Yohelga' as a new and distinct cultivar:

1.       Upright and outwardly spreading plant habit.
2.       Freely branching habit; dense and full plants.
3.       Uniform and freely flowering habit.

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4. Large decorative-type inflorescences with elongated oblong-shaped ray florets.
5. Bright yellow-colored ray florets.
6. Natural season flowering in mid September in the Northern Hemisphere.

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In side-by-side comparisons conducted in Alva, Florida, plants of the new Chrysanthemum differed from plants of the parent, the cultivar Yohelga, primarily in ray floret coloration as plants of the cultivar Yohelga had creamy white-colored ray florets. In addition, plants of the new Chrysanthemum flowered about one day later than plants of the cultivar Yohelga when grown under natural season conditions.

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Plants of the new Chrysanthemum can be compared to plants of the Chrysanthemum cultivar Janice, disclosed in U.S. Plant Patent number 9,817. In side-by-side comparisons conducted in Alva, Florida, plants of the new Chrysanthemum differed from plants of the cultivar Janice in the following characteristics:

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1. Plants of the new Chrysanthemum flowered about five days earlier than plants of the cultivar Janice when grown under natural season conditions.

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2. Plants of the new Chrysanthemum flowered later than plants of the cultivar Janice when grown under artificial short day/long night photoperiodic conditions.
3. Plants of the new Chrysanthemum had larger inflorescences than plants of the cultivar Janice.

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Plants of the new Chrysanthemum can also be compared to plants of the Chrysanthemum cultivar Gedi One Avi, disclosed in U.S. Plant Patent number 13,455. In side-by-side comparisons conducted in Alva, Florida, plants of the new Chrysanthemum differed from plants of the cultivar Gedi One Avi in the following characteristics:

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1. Plants of the new Chrysanthemum flowered about ten days earlier than plants of the cultivar Gedi One Avi when grown under natural season conditions.
2. Plants of the new Chrysanthemum had larger inflorescences than plants of the cultivar Gedi One Avi.

#### BRIEF DESCRIPTION OF THE PHOTOGRAPHS

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The accompanying photographs illustrate the overall appearance of the new Chrysanthemum. These photographs show the colors as true as it is reasonably possible to obtain in colored reproductions of this type. Colors in the photographs may differ slightly from the color values cited

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in the detailed botanical description which accurately describe the colors of the new Chrysanthemum.

The photograph on the first sheet comprises a side perspective view of a typical flowering plant of 'Golden Yohelga' grown in a container.

5      The photograph on the second sheet comprises a close-up view of typical inflorescences of the cultivar 'Golden Yohelga'.

#### DETAILED BOTANICAL DESCRIPTION

In the following description, color references are made to the Royal Horticultural Society Colour Chart, 1995 Edition, except where general terms of ordinary dictionary significance are used. The following observations and measurements describe plants grown in Alva, Florida during the winter in a fiberglass-covered greenhouse under conditions and practices which approximate those generally used in commercial garden-type Chrysanthemum production. One cutting was planted in a 15.25-cm container in early December, 2002. Plants were pinched one time, that is, the terminal apex was removed to enhance branching, at the end of December. One week after the pinch, plants were exposed to short day/long night photoperiodic treatments until flowering. During the production of the plants, day temperatures averaged 26°C and night averaged 18°C. Measurements and numerical values represent averages for typical flowering plants.

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BOTANICAL CLASSIFICATION:

*Chrysanthemum X morifolium* cultivar Golden Yohelga.

COMMERCIAL CLASSIFICATION:

Decorative-type garden Chrysanthemum.

5 PARENTAGE:

Naturally-occurring whole plant mutation of the *Chrysanthemum X morifolium* cultivar Yohelga, disclosed in U.S. Plant Patent number 13,811.

PROPAGATION:

10 Type: Terminal vegetative cuttings.

Time to initiate roots: About four days at 21°C.

Time to produce a rooted cutting: About ten to twelve days at 21°C.

Root description: Fine, fibrous; white in color.

15 Rooting habit: Freely branching.

PLANT DESCRIPTION:

Plant form/growth habit: Perennial herbaceous decorative-type garden Chrysanthemum. Inverted triangle with mounded crown.

20 Stems initially upright, then outwardly spreading. Freely branching with lateral branches potentially developing at every nodes.

Moderately vigorous to vigorous.

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Plant height: About 21 cm.

Plant diameter: About 32 cm.

Lateral branches:

Length: About 18.5 cm.

5 Diameter: About 4 mm.

Internode length: About 8 mm.

Aspect: Upright and outwardly spreading.

Texture: Pubescent.

Color: Close to 146A.

10 Foliage description:

Leaf arrangement: Alternate.

Length: About 5.5 cm.

Width: About 4.1 cm.

Apex: Cuspidate to mucronate.

15 Base: Attenuate with truncate tendencies.

Margin: Palmately lobed, sinuses divergent.

Texture, upper surface: Slightly pubescent.

Texture, lower surface: Pubescent; veins prominent.

Color:

20 Developing and fully expanded foliage, upper  
surface: 147A.

Developing and fully expanded foliage, lower surface: 147B.

Venation, upper surface: 147A to 147B.

Venation, lower surface: 147B.

5 Petiole length: About 1.7 cm.

Petiole diameter: About 2 mm.

Petiole color, upper surface: 147A to 147B.

Petiole color, lower surface: 147B to 147C.

#### INFLORESCENCE DESCRIPTION:

10 Appearance: Decorative-type inflorescence form with elongated oblong-shaped ray florets. Inflorescences borne on terminals above foliage, arising from leaf axils. Disc and ray florets developing acropetally on a capitulum. About 14 inflorescences per lateral branch.

15 Flowering response: Under natural season conditions, plants flower in mid September in the Northern Hemisphere.

Inflorescence bud (before showing color):

Height: About 4 mm.

Diameter: About 6 mm.

20 Shape: Oblate.

Color (lower surface of phyllaries): Close to 147A.

Inflorescence size:

Diameter: About 4.3 cm; large.

Depth (height): About 1.6 cm.

Disc diameter: About 4.5 mm.

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Receptacle diameter: About 3.5 mm.

Ray florets:

Shape: Elongated oblong.

Length: About 2.1 cm.

Corolla tube length: About 2 mm.

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Width: About 4 mm.

Apex: Acute or emarginate.

Margin: Fused.

Texture: Smooth, glabrous; satiny.

Surface: Concave to flat.

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Orientation: Initially upright, then perpendicular to vertical.

Number of ray florets per inflorescence: About 130 in numerous whorls.

Color:

When opening and fully opened, upper surface:

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Close to 9A.

When opening and fully opened, lower surface:

Close to 9B to 9C.

Disc florets:

Shape: Tubular; apex dentate, five-pointed.

5 Length: About 3 mm.

Width, apex: About 1.25 mm.

Width, base: About 1 mm.

Number of disc florets per inflorescence: About 30.

Color:

10 Immature: Close to 154A.

Mature:

Apex: Close to 9A.

Mid-section: Close to 144B.

Base: Close to 155D.

15 Phyllaries:

Quantity per inflorescence: About 22.

Length: About 6.5 mm.

Width: About 1.5 mm.

Shape: Ligulate.

20 Apex: Acute.

Base: Truncate.

Margin: Entire.  
Texture, upper surface: Smooth, waxy.  
Texture, lower surface: Pubescent.  
Color, upper surface: Close to 146A.  
5 Color, lower surface: Close to 147A.  
  
Peduncle:  
Length:  
First peduncle: About 4.25 cm.  
Fourth peduncle: About 5.3 cm.  
10 Seventh peduncle: About 8.2 cm.  
  
Diameter: About 1 mm.  
Strength: Strong.  
Aspect: About 40° from vertical.  
Texture: Pubescent.  
15 Color: Close to 146A.  
  
Reproductive organs:  
Androecium: Present on disc florets only.  
Anther color: 9A.  
Pollen: Moderate.  
20 Pollen color: Close to 12A.  
  
Gynoecium: Present on both ray and disc florets.

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Seed/fruit: Seed and fruit production has not been observed.

DISEASE/PEST RESISTANCE:

Plants of the new Chrysanthemum have not been shown to be resistant to pathogens and pests common to Chrysanthemums.

5 GARDEN PERFORMANCE:

Plants of the new Chrysanthemum have been observed to be tolerant to rain, wind and temperatures ranging from 0 to more than 38°C.